SEED CORN.

II.—Selecting Proper Types of Ear, Cob and Grain from the Crib.

Editors Progressive Farmer:

As the planting of good seed is one of the prime factors in determining successful corn-growing and further as something like 450,000 bushels of seed-corn will be planted this year in North Carolina, it seems well at this time to consider briefly some of the desirable characteristics of corn that should be in mind in the selection of our seed this spring.

The proper place, of course, to make selection of seed corn is in the field in the fall just before gathering time, making careful selections from the stalks bearing the largest amount of grain per stalk, as total yield of shelled corn per acre is the principal consideration in the production of corn. As the larger yields are generally from stalks that bear two or more medium sized ears, and not from those that bear one large ear, it is readily seen why field selection is superior to barn selection where consideration cannot possibly be given to selection of ears that grew two or more to the stalk. As the time has passed for field selection, it may be well to take up for consideration, for the benefit of those who did not field-select their corn last fall, a few points that should be observed in making barn-selection.

EARS.

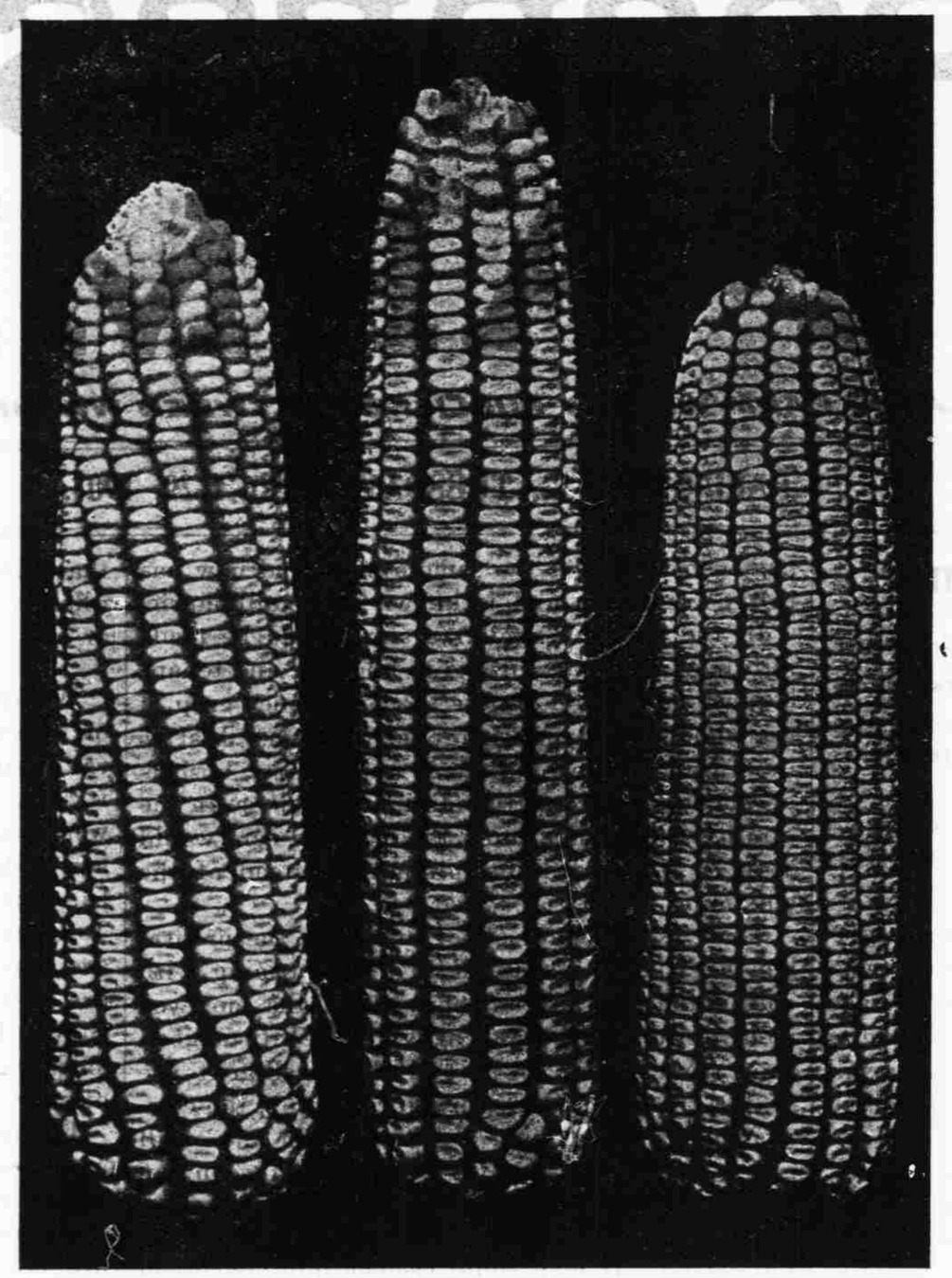
Ears of medium length and size are preferable to long and large ones, because the long and large ears were either produced on stalks that have but one ear per stalk or else on stalks that grew on some fertile spot in the field, either of which, when the seed are planted on average land, does not tend to produce the largest yields. Corn grown on average land will do better when planted on land of medium fertility than when corn grown on rich land is used, for the same reason that stock accustomed to poor conditions will do better on an inferior pasture than stock accustomed to favorable surroundings. The ears should be as nearly uniform in shape, size, color and indentation as possible and should be sound and firm without shrivelled kenels.

SHAPE OF EARS

The cylindrical ear, shown as (c) on this page is the best type, as it is the one that yields the highest percentage of grain and total yield of shelled corn. The rows of kernels should run parallel the full length of the cob without change in shape or diminution in size, or but very slightly. If the ears taper towards the tips there is always a suppression of yield, due to one or both of two causes, viz.: (1) Diminished size of kernels at the tips, and (2) dropping of rows of kernels. Before planting, the small kernels at the tips and butts of ears should be "rubbed" off. They are less likely to germinate, and what does sprout generally produce, when planted, more dwarfed and barren stalks than grains from the middle of the ear; this probably being due to the insufficiency of plant food in the grains to develop plants of sufficient size and vigor to secure with facility food for themselves from the soil before that stored up in the kernels has become exhausted.

COLOR OF EAR

Yellow corn should have deep-red cob, while white corn should possess a white one, and any variation from these types is indicative of crossing of varieties. The market price of meal or grits made from white corn with red cobs is lower because of particles of the red cobs getting into the corn and being ground in with the meal, giving it a dirty reddish cast.



A B C

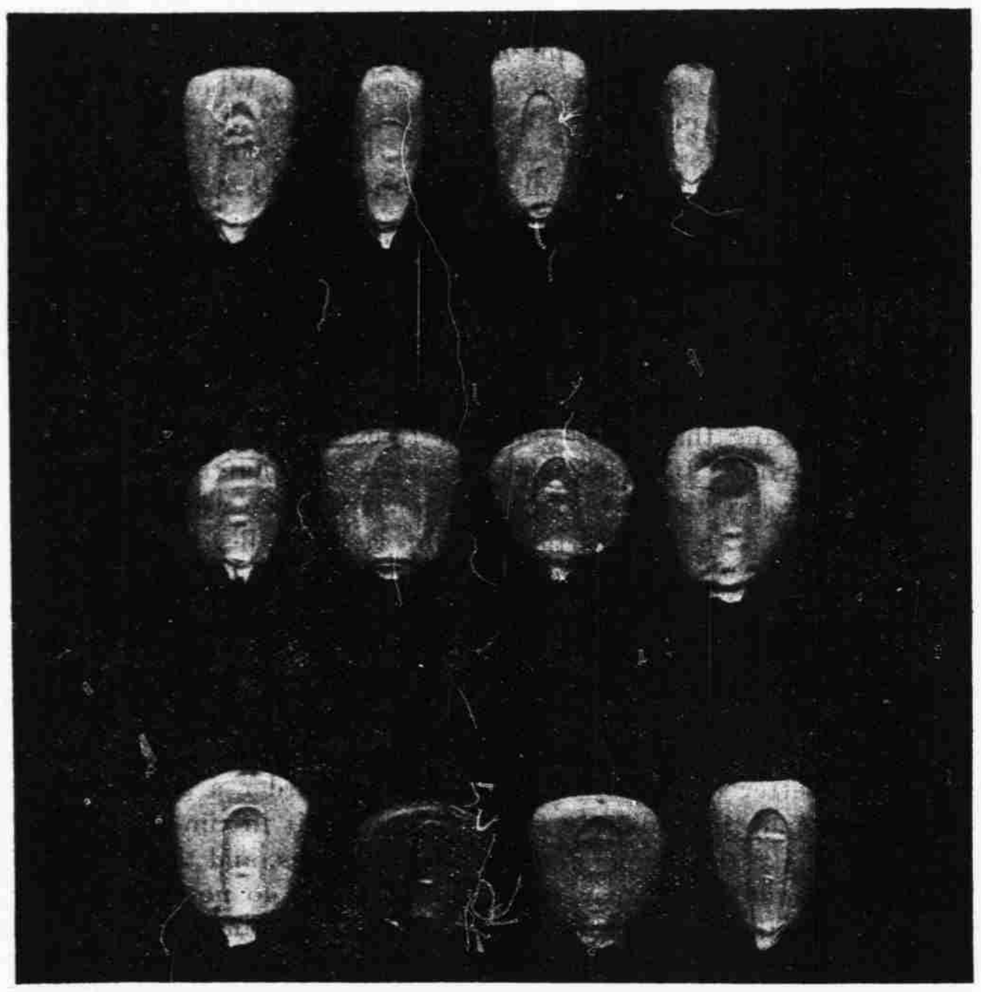
Types of ears: (a) too great distance between rows of kernels; (b) too small cob and too few rows of kernels; (c) well shaped cylindrical ear filled out at butts and tips.

SIZE OF COB

A medium-sized cob is generally the best, because it yields the largest proportion of corn to cob. As the cob is comparatively worthless, the ear that produces a high percentage yield of grain is to be preferred, other things being equal. If the cob is small, of necessity the number of grain-rows is restricted and when large the proportion of corn to cob is reduced, due to a decidedly strong tendency to generally produce shallow grains. The best size cob is shown in ear (b) on this page, while ear (c) is the proper size as it carries a tolerably large number of rows of deep wedge-shaped kernels.

LENGTH OF CIRCUMFERENCE OF EARS.

The length to circumference of seed ears should be about as 4 to 3, i. e., if an ear is 8 inches long its circumference should approximate 6 inches, measured about one-third the way from the butt to tip, to produce the largest percentage yield of grain. Too large circumference usually indicates small kernels of low vitality and poor feeding value.



GOOD AND POOR TYPES OF KERNELS.

FILLING OUT OF RUTTS AND TIPS OF EARS

The more perfectly ears are filled at butts and tips, the larger the percentage yield of grain. Although this characteristic of filling-out is transmitted from parent to progeny, yet unfavorable seasonal conditions, such as hot dry winds, storms and droughts, will materially interfere with it, if occurring at the time of pollination. Notwithstanding this, we should select ears as compactly filled at butts and tips as possible, or seed from these will have a strong tendency to reproduce themselves.

KERNELS.

The kernels should be uniform in size and possess a large seam and be of medium thickness and wedge shape (about twice as long as wide) and run the full length of the ear in parallel rows. A large grain indicates a kernel of strong vitality and high feeding value, because rich in oil and protein. The wedge-shaped kernel is the one that fills most compactly the total area on the cob and diminishes the space between the rows of kernels. We show herewith good and bad types of kernels. Kernels one and twelve are the best forms, while all the others are poor.

NUMBER AND DISTANCE BETWEEN ROWS OF KERNELS.

The number of rows to the ear should be large and the distance between rows small to secure the largest yields of shelled corn. A wide distance between grain-rows, indicates a reversion to an inferior ancestral type that will not justify the farmer of to-day in growing. The picture on this page strikingly shows the difference in the solid setting on (c) and (a). In (c) there is little space between the rows, while in (a) there is considerable.

GERMINATION TESTS.

It is always wise to test the germinating power of seed corn, especially if the seed are bought. It can be done as follows: Take two ordinary plates, fill one with sand saturated with water, and place 100 representative kernels, points downward, in the moistened sand, and then place the second plate over the first and set aside in some warm place. Keep the sand moist, and in from four to seven days 90 to 95 per cent of the kernels should have sprouted. If much less than this per cent germinate the seed cannot be relied upon as safe for use, especially in those portions of the State where the growing season is so short as to generally make replanting inexpedient.

If corn with the desirable characters designated above is planted, an increased yield of shelled corn per acre, over ordinary corn selected in the usual way, may be expected for the average season; and by continually selecting and planting corn with these characters which tend to larger yields, they will gradually become increased and more fixed. By proper seed selection an increased annual yield of from 1 to 5 bushels of shelled corn per acre can easily be produced on the soils of North Carolina. Then is not this a matter worthy of most serious consideration and patient endeavor?

C. B. WILLIAMS,
N. C. Department of Agriculture.
Raleigh, N. C.

In every parting there is an image of death.—George Eliot.